

REMARKS

Claim rejections under 35 U.S.C. § 102(e)

The Office Action rejects claims 1-6, 17, 23, 24, 27, 30-35 and 46 under 35 U.S.C. § 102(e) as being anticipated by Guevremont et al. (the '627 patent).

Regarding claims 1 and 30, the Office Action asserts that two electrodes (3, 4) create an electric field therebetween, and a first fluid flow is substantially opposed to the electric field.

Applicant respectfully traverses the rejection of these claims. The '627 patent does not teach a "cross-flow" as shown in the present invention. Figure 2a of the '627 patent would have to show the gas stream 2 moving in a direction that is perpendicular to its current direction in order to teach the "cross-flow" of the present invention. For example, figure 1 of the present invention shows a gas flow 28 that moves from cylinder 12 to cylinder 14. This is the cross-flow that is "substantially in opposition" to the electric field between cylinders walls 12 and 14. Note that the gas flow 28 is always emanates from the wall of cylinder 12 and moves towards the wall of cylinder 14. Figures 2a and 3 of the '627 patent, cited by the Office Action, clearly show a gas flow that is perpendicular to the flow taught and claimed by the present invention. Thus, the '627 not only fails to teach the claimed invention, it teaches away from the claimed concept of the present invention.

Likewise, the rejection of claims 2, 3, 23, 24, 31 and 32 are also traversed by Applicant as these claims are all dependent upon allowable independent claims as explained above in reference to independent claims 1 and 30.

Regarding claims 4-6 and 33-35, the Office Action asserts that Figures 2a and 3 also teach the claimed permeable electrodes.

Applicant respectfully traverses the rejection of these claims. Figs. 2a and 3 do not show any perforations or holes in the electrode walls that would create the desired cross-flow. Figure 2a shows no perforations of any kind. Figure 3 only has two apertures in the wall of the outer cylinder, and none through the inner cylinder wall. Aperture 21 is the injection port. The other aperture is for a laser beam to enter the system. Clearly, these apertures do not perform the function as claimed, nor could they perform the function of the holes 18 shown in figure 1 of the present invention.

Regarding claims 17 and 46, the Office Action asserts that the '627 patent teaches a voltage source.

The rejection of claims 17 and 46 are also traversed by Applicant as these claims are all dependent upon allowable independent claims.

Regarding claim 27, the Office Action asserts that the '627 patent teaches a high field asymmetric waveform.

The rejection of claims 27 is also traversed by Applicant as this claim is dependent upon an allowable independent claim.

Claim rejections under 35 U.S.C. § 103

Before addressing the specific obviousness rejection, Applicant wishes to clarify what is required to support an obviousness rejection. The Office Action must establish a prima facie case of obviousness to meet the burden of §103.

The PTO has the burden under section 103 to establish a prima facie case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.

In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (citations omitted).

In establishing a prima facie case of obviousness, the PTO "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." Id. at 1600. Rather, "[t]he test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made."

Connell v. Sears, Roebuck & Co., 220 U.S.P.Q. 193, 199 (Fed. Cir. 1983).

Applicant submits that the Office Action does not make a prima facie case of obviousness in that it does not show either (a) some objective teaching in the prior art that suggests combining the references, or (b) knowledge generally available to one of ordinary skill in the art which would lead that individual to combine the relevant teachings of the references to achieve the invention claimed, or c) that the combined inventions would result in the claimed invention. See In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

With these requirements in mind, we look at the specific rejections. The Office Action rejects claims 25, 26, 29, and 56-66 under 35 U.S.C. § 103 as being unpatentable under Guevremont et al. (the '627 patent) in view of Miller et al. (the '669 patent).

Regarding claim 25, Applicant respectfully traverses the rejection in light of section c) described above. Specifically, the combination of the references fails to teach the claimed invention. The '621 patent does not teach the cross-flow of the present invention. Furthermore, the ability to "the ability to enable the system to only pass at least one ion of a known mobility" as stated in claim 25 is a function of the cross-flow of gas in combination with the electric field between two electrodes. The "constant compensation field" of the '669 patent does not add anything new to the system. This is just the electric field present in any typical FAIMS system of the prior art, including the '627 patent.

Regarding claim 26, the '669 patent fails to "relate the selected ion mobility peak to gas cross-flow velocity and the opposing electric field" as stated in claim 26. Both the '627 and the '669 patents fail to teach the cross-flow as taught by the present invention.

Regarding claims 29, and 56-66, both the '627 and the '669 patents fail to teach the cross-flow as taught by the present invention. Accordingly, none of these dependent claims are taught by the prior art references of the '627 and the '669 patents. Furthermore, it is noted that the "cross-flow" of gas is relative to the direction of movement of atoms, molecules, particles, sub-atomic particles and ions whose mobility is being observed. In other words, the cross-flow of gas is approximately perpendicular to the direction of travel of atoms, molecules, particles, sub-atomic particles and ions.

Allowable Subject Matter

The Office Action states that claims 7-16, 18-22, 28, 36-45 and 47-55 are only objected to, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

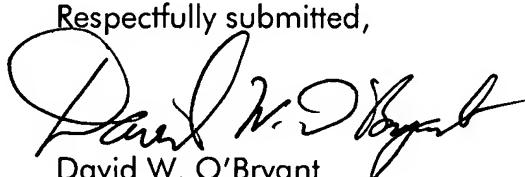
Applicant respectfully declines to amend the claims at this time. Applicant has shown that the '627 patent fails to

Conclusion

In light of the statements above, Applicant respectfully requests issuance of claims 1-66. If any impediment to the allowance of these claims remains after entry of this Amendment, and such impediment could be alleviated during a telephone interview, the examiner is invited to call David W. O'Bryant at (801) 478-0071 so that such matters may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 50-0881.

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Respectfully submitted,

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